A Sociocultural Perspective on the Development of U.S. Natural Resource Partnerships in the 20th Century

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Abstract.—Equable natural resource management partnerships between the public and private sectors are a relatively recent development in the United States. Modern resource management partnership forms are interpreted to be a result of an interaction of social, political and economic forces not normally associated with natural resource management activities. These forces are identified, discussed, and placed in historical context. Possible future trends in public / private management partnerships are extrapolated from current approaches.

Introduction

This paper examines the social, historical, and political context of public / private partnerships in natural resource planning over the past century. The antecedents to current approaches in natural resource management are examined to provide a context for a discussion of current methods and future trends. The approach is necessarily "broad-brush", due to the length of time discussed, as well as the huge number of resource management projects that have taken place in the United States in the last 100 years.

This paper will focus primarily on the "human" aspects of watershed management. In a recent paper, Penny Firth, the administrator of the joint National Science Foundation (NSF) / Environmental Protection Agency (EPA) / US Department of Agriculture (USDA) "Water and Watersheds" grant program, provided a long series of water related environmental and natural resource problems and concerns (Firth 1999). None of the issues discussed by Firth would have been a problem, without either, 1. Direct human action, such as pesticide contamination of groundwater, or 2. Direct human concern, such as loss of potable groundwater supplies in urban areas. Humans arguably cause many, if not most, natural resource "problems". Only human perception and interpretation of natural conditions result in perceived "shortages" and "concerns". Given this entirely, and uniquely, human problem, why are the opinions, wishes, and desires of concerned people not fully addressed in much of modern natural resource planning? At the end of the 20th century, experience is showing us that without fully involving affected communities and individuals in the earliest stages of planning, "management" and "stewardship" activities are rarely successful (Toupal and Johnson 1998; Endicott 1993; Daly 1994).

Natural resource planning and management is a dynamic and evolving practice (Daly 1994; Kenney 1999; Griffin 1999; Nazarea et. al. 1998). Resource management began in earnest in the United States in the early part of this century. As U.S. economic and resource policy and concerns evolved, so did methods and approaches to natural resource management. In order to understand contemporary approaches, a brief discussion of the historical and political context of natural resource management in the United States during the 20th century is in order. For the most part, except where noted, changes in U.S. federal policy and practice are used synonymously with changes in "public" policies. Private sector changes generally refer to efforts of non-federal government groups and individuals.

Historical Development of Natural Resource Management

For purposes of this discussion, the 20th century has been broken into three broad time periods; the early period, from 1900-1960, the NEPA period, from 1961-1980, and the modern period, from 1981 to the present.

Early Period: 1900-1960

This period of time is marked by several characteristics that both form the basis for development of partnerships later and are *not* typical of later partnerships. One of the more striking characteristics is the role played by governments, particularly the federal government, during this period.

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A series of large-scale socioeconomic events took place during the first three decades of this century that centralized more power in the federal government and eroded the power of the private sector (Keller 1994). World War I, and the American involvement in the war, engendered an air of national success, national confidence, and a great expansion in the industrial and economic capacities of the private sector. This was followed by the collapse of American and other economic markets during the stock market crash of 1929, which in turn, precipitated the American Great Depression (Garraty 1986; Saint-Etienne 1984; Louis 1968). As the economic stability of the private sector in America collapsed, the public turned to the government to provide security, in economic and many other senses (Garraty 1986).

The American federal government, while initially unprepared for the disastrous consequences of the Depression, responded relatively quickly with programs like the Civilian Conservation Corps (CCC) and the Work Projects Administration (WPA) (Lorence 1996; Garraty 1986; Keller 1994). The advent of these programs saw some of the first widespread, federally sponsored, efforts at natural resource conservation (Sklar 1992; Smith 1984).

A consequence of the use of programs such as the CCC and WPA was the development of a number of perceptions of the federal government on the part of the general populace. CCC and WPA work was carried out by American citizens from all walks of life. Few of these workers had formal training in natural resource management and conservation work. The federal government hired the few "natural resource" experts available, as well as other professionals, such as engineers, and put these individuals in charge of large groups of workers (Garraty 1986). Due to this style of labor management, a perception was born that the government provided "experts", and was a repository of specialized knowledge that the average worker did not have. This, in turn, led to the federal government occupying a role in natural resource management projects that was both paternalistic and dictatorial (Keller 1994).

Another consequence of this period of social and political development in American federal natural resource management was a tendency to focus on easily recognized and assessed portions of the natural environment. It was easy to see soil erosion; it was relatively easy to point at deforestation as a problem. These were important elements in programs such as the CCC and WPA, which needed large scale problems that were easily addressed by relatively simple, brute-force approaches (Smith 1984). Dams could be built, thousands of seedlings could be planted, and channels could be dug by untrained people under the supervision of a small number of "experts". The federal government defined the problems, defined the solutions, and then "fixed" the problems by employing lots of people. Everyone was happy. Nobody ever thought to ask the people who lived in an area that had "problems" what they thought about a "solution". The government knew best, and the average citizen had an almost blind trust in the federal definition of problems and solutions. Those problems were almost always defined in biophysical terms, such as soil erosion (Smith 1984; Sampson 1981). Rarely were causes, such as overgrazing, or farming that caused increased runoff, addressed. Underlying factors, such as traditional agricultural practices unsuited for more modern farming technologies were simply not addressed at all. In other words, symptoms were being treated, but not the root of the problem. This reactive state of natural resource management and watershed efforts lasted until the advent of World War II, in the late 1930s (Held and Clawson 1967).

World War II, while serving to lift America out of economic depression, also further solidified the role of the federal government as a controlling, and somewhat omniscient, body of experts. The economic boom and general feeling of national solidarity and success that followed the second World War, extended into an expanded federal interest in land and natural resource management. The massive industrial growth in the United States in reaction to the need for war materiel also fueled an equally huge increase in the need for raw materials, as production switched over to products suitable for civilian consumption. The "baby boom" following the war increased the demand for agricultural produce and building materials to previously unseen levels (Findling and Thackeray 1996).

These, and many other factors, caused natural resource management efforts to be driven by primarily economic pressures, such as increasing timber production, hydroelectric power supplies, or agricultural production. This trend, coupled with the previously established focus on biophysical resources within a watershed, resulted in natural resource management and watershed efforts that were controlled, to a large degree, by corporate interests, such as power or timber companies (Evans 1998; MacGaffey 1985) as a willing partner in most of these efforts, cooperating because of perceived benefits of economic development.

The Early Period of watershed management in the U.S. is characterized by the development of a "top-down" relationship between the federal government and other concerned groups and individuals. A centralization of decision-making and funding authority marks the federal government's efforts in natural resource management prior to 1960.

NEPA Period: 1961-1980

The National Environmental Policy Act (NEPA, 42 U.S.C. 4332), passed in 1969, was the result of a reaction on

the part of the American people to the ongoing unilateral and dictatorial actions of the federal government. By the late 1950s and early 1960s, the numbers of people with greater education and professional expertise in the general populace was increasing rapidly, primarily as a result of the increased subsidization opportunities and lowered costs of higher education following the Second World War (Moss 1993; Galambos 1983). This component of the population began to question both the economic and management decisions of the federal government.

The reasons for the questioning of federal decisions are many and varied, and appear to be symptomatic of the era in general (Evans 1998; Moss 1993). Throughout the 1960s, it was shown with increasing frequency that the federal government was often not making decisions with the best interests of local populations in mind (Galambos 1983). Mounting evidence indicated the federal government was basing many decisions on economic and political drives and motives that often resulted in adverse consequences for local communities (Moss 1993; Evans 1998). At roughly this juncture it becomes clear that the general populace had lost a substantial amount of trust in the federal government, for a wide variety of reasons (Moss 1993). Federal decisions were viewed with increased skepticism, and local communities were demanding to be recognized and allowed input in the federal planning processes. It was in this social and political atmosphere that NEPA was conceived and passed.

Section 102 of NEPA explicitly calls for environmental impact statements for federal projects that might cause a significant effect to the human environment. The federal government was told to be accountable for its actions relative to environmental concerns, and specifically with regard to those actions that might affect the "human environment" (Rodgers 1996). As with many pieces of legislation, the greater part of implementation strategy was left to individual departments and agencies of the federal government. NEPA, as originally written, is a broad policy statement, and only in later regulations were specific requirements for public participation spelled out. What resulted was the federal government generally implementing a review process consisting of federal problem identification. Usually, a problem was identified by the federal government, which was then "scoped" with limited input from local groups and experts. Several alternative solutions to the problem would be developed, once again by the concerned lead federal agency (the birth of the "do-nothing" alternative). At this point, the public was usually asked, through a series of public meetings, to provide input on which alternative would be the most acceptable (Rodgers 1996; Lazarus 1991).

This model of public involvement assumed that the federal government "knew best", and allowed only a restricted range of public inputs. The federal government also assumed that allowing public input into selection of federally defined and determined "alternatives" was sufficient to meet the strictures of NEPA. Very rarely were concerned local communities fully involved in the development of "alternatives" (Grieder, Krannich, and Berry 1991; Lazarus 1991; Salamon, Farnsworth, and Rendziak 1998).

Experience with NEPA and the "NEPA process", i.e., scoping, alternative identification, public participation of various kinds, and problem solution, trundled ahead through the 1970s. Federal agencies, in good faith, did their best to implement the broad, sweeping strictures of NEPA, and there was an apparent increase in several areas of environmental quality during this period (Rodgers 1996). Simultaneously, the public was beginning to recognize and decry the limitations of the NEPA process, as used by federal agencies. Individuals and groups soon learned that they wanted more input, earlier in the planning process, and wanted more impact on alternative development and selection. Federal agencies, just beginning to adjust to the existence of NEPA and other environmental laws, were faced with a new set of demands for public participation and involvement. About this time, another type of issue was also being raised by the increasingly knowledgeable public: multiple use (Daly 1994; Cleary 1988; Hoffman 1994; Romm 1995).

Modern Period: 1981-Present

NEPA stipulated one of the first environmental reporting standards and processes that federal agencies were required to comply with. The public participation model provided by NEPA and its implementing regulations served to mold the federal perception of what appropriate public participation should be (Adams 1993). During the 1970s and early 1980s, this perception was institutionalized in the form of agency level policies and procedures (NRCS 1996).

The concerned public, however, was demanding an ever-increasing level of accountability and information release by federal agencies (Lazarus 1991). In addition, NEPA and its various forms of implementation by various agencies had been scrutinized by many organizations, private and public. Several points of the law had been called into question, and clarified, mostly by regulation (Rodgers 1996). In the U.S., environmental organizations were progressing into a "post-NEPA" state of expertise. "Public participation", as stipulated under NEPA, was no longer considered adequate. The process of federal alternative formulation used by most agencies was also being increasingly called into question (Adams 1993).

The dictatorial, "top-down" nature of earlier federal efforts in natural resource management was recognized as being a part of the perceived problem (Adams 1993;

Adler 1995). By the late 1980s, different approaches to planning were being developed that emphasized a "bottom-up", or "grass-roots" approach to natural resource planning (Salamon, Farnsworth, and Rendziak 1998). These approaches were intentionally and explicitly aimed at involving local people and communities in the planning process. A goal of these planning efforts was in the identification of problems and solutions in conjunction with concerned individuals and communities, rather than by the federal government alone(Endicott 1993; Cleary 1988; Hicks 1992).

By the early 1990s, non-governmental organizations (NGOs) were rapidly increasing in both number and popularity. Watershed councils, and other locally formed and driven forms of participation, were being increasingly used by concerned communities to give voice to concerns in natural resource planning (Kenney 1999; Griffin 1999).

The close of the century sees locally led planning efforts developing at a rapid rate. The rate of change in private sector organization and expertise has accelerated markedly in the last thirty years of this century (Lant 1999). This accelerated rate of change may be viewed as the result of a complex trend in U.S. society in general, as well as a specific change the relationship between the public and private sectors.

Modern Partnership Development: Primary Factors

The foregoing discussion has been intended to show that natural resource partnerships in the U.S. have only recently evolved from less equable approaches. The idea of partnerships, in which all members of the relationship have equal say and decision making power, is a relatively new approach to natural resource planning.

Four primary factors are postulated to have been key in the development of modern natural resource partnerships in the United States. These factors are: 1. A loss of trust in the federal government, resulting in greater skepticism toward federal planning efforts on the part of the public, 2. Dramatically increased general public access to information in print, broadcast, and digital, forms. This relatively rapid advance in communication and data manage technologies has led to an markedly increased level of awareness of federal environmental actions, relative to pre-NEPA levels, 3. An increased focus on "non-commodity" aspects of the natural environment, such as aesthetics and recreational values, and 4. An increasing demand on the part of the public to actively incorporate multiple uses in natural resource planning. Natural resource management and land stewardship activities in the U.S. are benefitting from the atmosphere an increased interest and participation. An examination of these primary change factors will illustrate the impetus behind the current shift to a partnership approach.

The first factor, loss of trust in the federal implementation of environmental and natural resource legislation and programs, appears to the result of multiple causes. These causes include, but are not limited to, lack of a clear environmental agenda that extends over multiple presidential administrations; a fragmentation of compliance responsibilities among multiple agencies; and a lack of funding necessary to implement both legal restrictions and programs (Lazarus 1991). This lack of trust has caused non-governmental organizations (NGOs), private citizens, and private interest groups to assume an adversarial stance, relative to federal actions. Current efforts at partnership building, particularly between federal agencies and private individuals and groups, have resurfaced the issue of trust as being of primary importance to partnership success (Toupal and Johnson 1998; Salamon, Farnsworth, and Rendziak 1998).

The second factor, the importance of dramatically increased access to multiple sources of reasonably accurate information, cannot be overstated. During the NEPA period, one commonly identified drawback of the public meeting method of gaining input was a lack of knowledge on the part of interested people about the timing and location of meetings (Kenney 1999; Griffin 1999). Today, anyone with access to the World Wide Web can almost immediately receive a staggering variety of materials on almost any subject. The Internet and World Wide Web are rapidly becoming preferred methods of distributing information for federal agencies, as well as the private sector (Tapscott 1999; Wolinsky 1999). It is increasingly easy to rapidly distribute accurate, timely information to a very large audience using these digital communication methods. No longer do agencies have to rely on physical meetings to gain input. A Web page with a well structured questionnaire and good background material can provide the equivalent of months of meeting and interview information to federal decision makers in a relatively short time. Equally, private sector partners can provide immediate feedback during planning, or can raise issues and concerns before the planning process proceeds, based on erroneous assumptions (Tapscott 1999).

The increased availability of information, compared to the communication technologies of even 20 years ago, has sharply raised the public's level of awareness of federal activities. Many private organizations maintain a watch over federal and other agencies, monitoring planning and environmental compliance activities. These "watchdogs" use multiple media sources to immediately bring the public's attention to bear on perceived mistakes or failures to comply with environmental law. This "watchdog"

activity, coupled with a rapidly expanding use of the Internet and World Wide Web as media platforms, allows a person to become very familiar with a wide range of actions and issues within a relatively short time.

The third factor that has brought about the current state of public/private partnerships is an increased focus on "non-commodity" aspects of the environment and natural resources (Griffin 1999). These aspects include non-traditional resources such as landscape aesthetics, recreation potential of landscapes, indigenous traditional beliefs about land and other natural resources, and non-tangible uses of land and resources, as well as the development of a "non-use" ethic (Nowak 1992; Brunson 1996; Griffin 1999). None of these things are particularly amenable to traditional, capitalist, economic valuation, but are perceived by many people to be vital parts of watersheds that must be appropriately addressed in management planning (Griffin 1999). Most of these "non-commodity" aspects of natural resource management are also difficult to adequately address without sound relationships between concerned local individuals and communities and planners. One way to achieve such relationships is through the development and use of shared-power partnerships, rather than a more traditional, "top-down" approach to planning (Austin 1998; Nazarea et. al. 1998).

The fourth, and final factor, is an increasing demand on the part of the public to actively and realistically incorporate multiple uses into natural resource management planning (Brunson and Kennedy 1995). No longer are management plans that are driven only by the interests of a single group or economic concern considered sufficient (Kaufmann et al 1994; Cleary 1988; Brunson 1996). This factor is very important in most modern public/private partnerships: shared power and shared decision making authority (Toupal and Johnson 1998). An array of concerns must be balanced in modern partnerships, and economics can no longer be assumed to be the most important factor in decision making (Nazarea et. al. 1998; Johnson 1998). Appropriate and meaningful incorporation of multiple concerns in the management of land and other natural resources is the goal of most modern partnerships.

Current Approaches to Natural Resource Management

Currently, there are a number of approaches being used in the U.S. to pursue natural resource planning. Most of these new approaches are much broader in scope and intent than earlier efforts. Modern approaches also tend to emphasize, to greater or lesser degrees, involvement of local people and communities in the planning process. Two of the most popular of these current approaches are discussed here to illustrate the trend and direction of recent efforts.

Ecosystem Management

One of the most widely publicized terms in recent natural resource management efforts has been ecosystem management (Kaufmann et al 1994; IEMTF 1995; FEMAT 1993; Cortner and Moote 1999). Debate is still ongoing as to the definition of the term, and there appears to be widespread discussion about appropriate units of measurement in ecosystem approaches (Ruhl 1999; IEMTF 1995; Cortner and Moote 1994; Grumbine 1994). Regardless of the technical criticisms of ecosystem management, it appears to be a political reality (Ruhl 1999; Cortner and Moote 1999), and is therefore used as a discussion tool in most environmental policy debates.

It is difficult to find a single, universally accepted definition of ecosystem management. As noted by Ruhl (1999:519):

"The term "ecosystem" is much like Darwinism and Marxism, in that everybody "knows" what it means, but after not very much discussion of the subject it turns out everybody's meaning differs to some degree."

In general, however, it appears that ecosystem management generally means incorporating multiple concerns, both human and biophysical, in planning, for areas that are defined by ecological, rather than geopolitical, factors (IEMTF 1995). It also appears to be an explicit effort, on the part of some federal natural resource planners, to move to a much broader, or holistic, approach, to natural resource planning (USFS 1999a).

Ecosystem management, from a socioeconomic perspective, has some shortcomings. First, the lack of an easily definable scale that is both scientifically and politically useful makes it difficult to determine the scope of community involvement for ecosystem management efforts (Kaufmann et al 1994). In a similar vein, the lack of consistently definable biophysical scales makes it difficult to develop management strategies that can be implemented in a practical and cost effective way. When pragmatic local decisions are made in an attempt to implement ecosystem management, it often becomes difficult to tie such decisions back to an overarching ecosystem level management plan in any meaningful way (Kaufmann et al 1994; Ruhl 1999). This may not be as much a critique of the concept of ecosystem management, as it is a comment on the lack of appropriate methodologies.

Ecosystem management also runs the risk of becoming yet another "top-down" approach, given its initial heavy reliance on "science" heavy environmental factors

(Kaufmann et al, 1994) to define problems and concerns. Public agencies who use the ecosystem approach must remain cognizant of the need to incorporate locally defined, intangible resource concerns in planning, as well as scientifically defined, biophysical resource issues.

As an example, humans are acknowledged by most public planning agencies as being vital and highly influential components of ecosystems (USFS 1999a, 1999b; BLM 1997; Kaufmann et al 1994; IEMTF 1995). While making this acknowledgment, most agencies purporting to utilize an ecosystem approach continue to produce natural resource management schemes that are focused, almost entirely, on biophysical resources, with an emphasis on economically important portions of the natural resource spectrum, such as timber or grazing land (USFS 1999a, 1999b; BLM 1997; IEMTF 1995). Multiple use and other "human" concerns are included in supporting documentation, but it is rare to find long term management goals that address such issues in a substantive way (USFS 1999a, 1999b; BLM 1997).

Community-Based Planning

Many federal agencies have stated that "community based", or "locally led" planning is either a component of a broader approach to holistic planning, such as the ecosystem approach, or is a primary method used to accurately capture and incorporate local social, economic, and other "human" concerns in the planning and management process (USFS 1999a, 1999b; BLM 1997; NRCS 1996; IEMTF 1995).

There have been several adaptations of community based planning used by various private sector NGOs and other groups (Western and Wright 1994; Endicott 1993). Community based, or locally led, planning is an explicitly "bottom-up" approach. The flexibility of the approach results in multiple definitions of the term, as nearly every groups of users adds their own specific "twist" to the locally led concept (Endicott 1993; Salamon, Farnsworth, and Rendziak 1998).

Community based / locally led planning efforts can be generally characterized as initiated by concerned local individuals or groups who desire meaningful, broadly representative, input into a planning process (Western and Wright 1994). These planning processes may or may not have been initiated by public sector entities. The locally led planning process may be centered around organizing private individuals and information to bring a local concern to the attention of public planning agencies.

Community based / locally led natural resource planning efforts are usually issue or concern driven (Western and Wright 1994). This allows such efforts to define spatial limits of concern based on interest and occurrence, rather than on geopolitical boundaries. This approach may also introduce difficulties into the planning process, as it encourages initially unrealistic definitions of areas of concern.

Compared to ecosystem management, community based / locally led planning efforts initially rely less heavily on biophysical, "science" based, problem definitions for scoping purposes. Community based planning efforts usually collect and define issues and concerns raised by local individuals and groups, and then pursue the "science" of those concerns. This approach usually results in a much higher level of community involvement in planning, as well as a higher level of stakeholder identification with, and acceptance of, the results of the planning effort (Brunson and Kennedy 1995; Salamon, Farnsworth, and Rendziak 1998; Cortese 1999).

As the foregoing discussions of ecosystem management and community based planning illustrate, change is indeed afoot in natural resource management circles. Public agencies, particularly federal agencies, are rapidly becoming more aware of the need to incorporate local concerns and knowledge into natural resource planning. Private sector NGOs and other groups are quickly recognizing the potential benefits of early and substantial involvement in natural resource planning efforts. What does this mean for the future?

Trends and Changes

The number of locally led, community based, ecosystem scaled, natural resource planning efforts is increasing (Lant 1999; Firth 1999). This trend shows few signs of weakening, and probably will not, given the citizenry's continued low level of trust in public sector decision making (Lazarus 1991). It appears that there will be a continued decentralization of decision-making, shifting power away from centralized, bureaucratic management of natural resources. This shift to what has been variously termed, community led decision making, watershed democracy, or civic republicanism (Griffin 1999; Adler 1995; John 1994) appears to be gaining in popularity across the U.S.

What does this shift mean to public sector agencies? Federal agencies, in particular, are going to have to develop new methods to address local concerns and issues. Some fundamental federal policies on natural resource issue definition and measurement must be changed. These policies are currently centered almost completely around the definition and quantifiable assessment of biophysical resources, such as water quality, soil loss, or biomass density. These policies must be altered to accept local assessments of intangible resources, or resources that are not easily quantified, such as aesthetics or viewscape perceptions (and other uniquely "human" perceptions of the environment).

Public sector planners must step back from their current positions in the planning process and examine the degree to which decision making is shared, or not shared. Shared decision making authority is vital to successful natural resource partnerships.

Better methods of assessing the variety and interests of local communities must be developed. Social scientists are really only starting to explore how to work with communities in the U.S. to further natural resource planning efforts. Methods that have been shown to work well in other cultures and countries are being adapted to work with communities of agriculturists, environmentalists, and other concerned groups here at home. Previously unrecognized biases and assumptions are being questioned with each new project. This trend, hopefully, will continue well into the future, providing both the private and public sectors with new and improved tools.

Finally, public agencies are going to have to revise how they address issues raised by natural resource partnerships. New approaches must be developed that recognize the expertise of local communities in problem identification. The federal government must change from an autocratic judge of what is valid and invalid in natural resource planning efforts, to a provider of technical and fiscal support and facilitation.

In closing, it must be noted that natural resource partnerships between the public and private sectors are in their nascent stage. It is not often that one realizes they are in the middle of one of those much-touted paradigm shifts. The ongoing movement to involve local concerns and local knowledge in planning efforts, is having, and will continue to have, growing pains. This is a fascinating and eventful period in the development of natural resource management partnerships, and the future holds nothing but promise.

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